#include <OneWire.h>

#include <DallasTemperature.h>

#include "HX711.h"

#define SensorPin A0 // the pH meter Analog output is connected with the Arduino’s Analog

unsigned long int avgValue; //Store the average value of the sensor feedback

float b;

int buf[10],temp;

float temperature = 25,tdsValue = 0;

#define calibration\_factor -96650.0 //This value is obtained using the SparkFun\_HX711\_Calibration sketch//7050

#define LOADCELL\_DOUT\_PIN 3

#define LOADCELL\_SCK\_PIN 2

HX711 scale;

void setup()

{

pinMode(13,OUTPUT);

Serial.begin(9600);

Serial.println("Ready"); //Test the serial monitor

gravityTds.setPin(TdsSensorPin);

gravityTds.setAref(5.0); //reference voltage on ADC, default 5.0V on Arduino UNO

gravityTds.setAdcRange(1024); //1024 for 10bit ADC;4096 for 12bit ADC

gravityTds.begin(); //initialization

scale.set\_scale(calibration\_factor); //This value is obtained by using the SparkFun\_HX711\_Calibration sketch

scale.tare(); //Assuming there is no weight on the scale at start up, reset the scale to 0

sensors.begin();

}

void loop()

{

for(int i=0;i<10;i++) //Get 10 sample value from the sensor for smooth the value

{

buf[i]=analogRead(SensorPin);

delay(10);

}

for(int i=0;i<9;i++) //sort the analog from small to large

{

for(int j=i+1;j<10;j++)

{

if(buf[i]>buf[j])

{

temp=buf[i];

buf[i]=buf[j];

buf[j]=temp;

}

}

}

avgValue=0;

for(int i=2;i<8;i++) //take the average value of 6 center sample

avgValue+=buf[i];

float phValue=(float)avgValue\*5.0/1024/6; //convert the analog into millivolt

phValue=3.5\*phValue; //convert the millivolt into pH value

Serial.print(" pH:");

Serial.print(phValue,2);

Serial.println(" ");

gravityTds.setTemperature(temperature); // set the temperature and execute temperature compensation

gravityTds.update(); //sample and calculate

tdsValue = gravityTds.getTdsValue(); // then get the value

Serial.print(tdsValue,0);

Serial.println("ppm");

delay(1000);

sensors.requestTemperatures();

Serial.print("Celsius temperature: ");

Serial.print(sensors.getTempCByIndex(0));

Serial.print(" - Fahrenheit temperature: ");

Serial.println(sensors.getTempFByIndex(0));

Serial.print("Reading: ");

Serial.print(scale.get\_units(), 3); //scale.get\_units() returns a float

Serial.print(" kg"); //You can change this to kg but you'll need to refactor the calibration\_factor

Serial.println();

}